

Research Department
Federal Reserve
Bank of
San Francisco

January 25, 1980

Explosion in the Granary

The Soviet invasion of Afghanistan was like one of those random sparks that set off violent explosions in grain elevators, for it led to counteractions that could unsettle world markets for years to come. Among other things, the President embargoed shipments of 17 million tons of food and feedstuffs—everything that had been scheduled for shipment this year above the basic 8 million tons specified in the U.S.-U.S.S.R. trade agreement. As a result, many analysts are now predicting a decline of 10 percent or more in U.S. farm income this year, despite several measures which should cushion the blow—including \$2.5 billion in higher crop-loan payments, and perhaps considerably more if crop-reduction payments are added to the package.

Nonetheless, the U.S. remains the key supplier in the world agricultural market, with its \$32.0 billion of food and fiber exports in the latest (1978-79) crop year. Much of its pre-eminence has been achieved in the past decade, but that export performance has been accompanied by the appearance of a very volatile purchaser, the Soviet Union, on the other side of the market.

Postwar development

The U.S. (with Canada) has emerged as the world's breadbasket only since World War II, in terms of net grain-trade flows between regions. (Grain data provide a useful indicator of food trends, since grains supply more than half of the world's food energy supply when consumed directly, and a sizable portion of the remainder when consumed indirectly as meat and dairy products.) The shift is dramatic; during the 1930's, all geographic regions except Western Europe were net exporters, but now only the North American countries (and occasionally Australia) are major factors on the supply side of the market. Countries such as Brazil, Argentina, Thailand and (potentially) the Sudan are increasingly

important, but the two North American countries are likely to remain the dominant suppliers for some time to come.

Accelerated population growth in many areas has accounted for both the upsurge in demand and the reshaping of world trade patterns. For example, North America and Latin America both had about the same population in 1950, but Latin America's population then grew explosively over the next quarter-century, so that it is now more than 100 million larger than North America's. The same pattern elsewhere has created deficit trade positions and heavy pressures on North America's grain supplies. Add to that the fickle weather patterns of the 1970's—combined with the U.S.S.R.'s decision during that decade to upgrade domestic consumption patterns through mammoth feed purchases overseas—and you have the ingredients for a rapidly expanding yet very volatile market for U.S. (and Canadian) farm products.

U.S. dominance

In the 1979 crop year alone, the U.S. exported a record \$32.0 billion in farm products—up 17 percent over the previous year's figure (see chart). Export volume of 137.5 million metric tons also set a new record—up 4 percent despite several major strikes which disrupted transportation patterns during the year. The nation's agricultural-trade surplus reached \$15.8 billion last year, offsetting a considerable part of the red ink generated by petroleum imports. In this as in other recent years, the U.S. exported the production of one out of every three harvested acres. Over the past decade, the U.S. exported more than one-fourth of its corn crop, one-third of its cotton, more than one-half of its wheat and soybeans, and two-thirds of its rice production. Soybeans and feedgrains have shown the most spectacular growth, accounting for one-half of the total growth in exports between the early 1960's and the late 1970's.

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Moreover, the U.S. consistently accounts for a much larger portion of world agricultural trade than it does of world agricultural production. The U.S. generally accounts for more than half the world's trade in coarse grains and soybeans, while producing only one-third to two-fifths of those products. Also, it accounts for two-fifths of total cotton and wheat trade, but only one-sixth of world production, and it accounts for roughly one-fourth of the rice trade but only 2 percent of world output.

The competition

Despite U.S. dominance in the world market, competition is becoming more vigorous and more widespread. Some traditional competitors—Canada, Australia and Argentina—are increasing their efforts in the world grain trade. In addition, Brazilian soybeans, Malaysian palm oil, Thai rice and corn, Pakistani cotton, and other new products now have gained a foothold in competition with American products. Government policy in all of these countries has encouraged more production and trade for export, as a means of paying soaring bills for imported oil.

For decades, our traditional competitors have imposed government restrictions on the grain trade through the mechanism of national marketing boards. These boards typically provide price guarantees, set limits on prices paid to farmers, and subsidize exports when supplies are large. This approach creates problems for the U.S., the residual supplier for world markets, because foreign purchasers buy American products only after less expensive subsidized supplies are exhausted. This makes the U.S. the prime adjuster of production and stocks in response

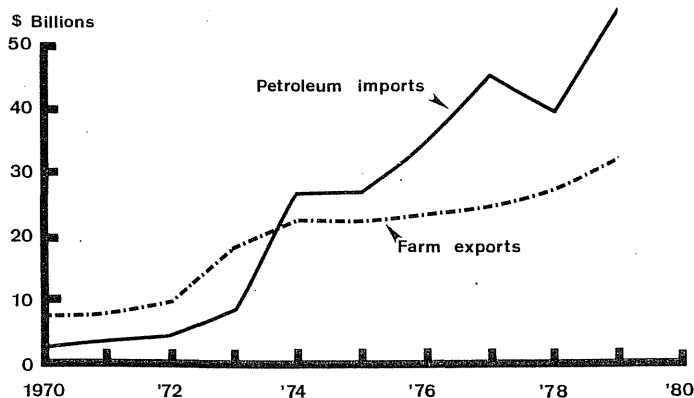
to changing market conditions. On the other hand, the U.S. as the residual supplier frequently can obtain better prices than the subsidizing suppliers.

Several developing nations have begun to eat into U.S. market shares through strong efforts devoted to production for export. The prime example is Brazil, which was once a two cash-crop exporter (coffee and sugar) but is now a multi-crop food exporter. In particular, Brazil has boosted its soybean output more than twelve-fold in less than a decade—with some help from Japan, which sought out new supply sources after being hit by the U.S. 1973 embargo on soybean shipments. In addition to ranking as the world's second largest soybean exporter, Brazil is also exporting corn and cotton, and is nearing self-sufficiency in wheat.

Yet despite the Brazilian success, and the more limited successes of some other developing countries, the transition from a food-deficit to a food-surplus situation can be quite difficult. In a 1978 analysis of export prospects, the U.S. Department of Agriculture (USDA) commented, "Even in areas where land and climate are suitable for efficient agricultural production, great cultural, economic and political obstacles often remain. Many countries are restricted by traditional land-tenure systems and cultural practices, lack of marketing facilities, and cheap-food policies for urban areas." Indeed, few if any areas can match the combination of climate, soils, and socio-economic conditions that have created the phenomenal record of achievement of the American Heartland.

The customers

Larger and more affluent populations throughout the world have become prime customers for American and other agricultural exporters. The prime customers are the industrialized countries of Western Europe and Japan. The European Community, although close to self-sufficiency in food grains, has had to import



increasing quantities of feed grains and protein to satisfy its rapidly growing demand for livestock products. Japan similarly has boosted its demand for meat and for feed imports to produce it, as a new and more affluent generation has shifted its preference in favor of Western-style diets.

Among the developing nations, India has grown from a major food-aid recipient during the 1960's to a major commercial importer of U.S. grains in the 1970's. Also, the OPEC nations are spending a large share of their rising foreign-exchange earnings on food imports—mainly animals, animal products, feedgrains and oilseeds. Most of the OPEC nations have limited productive capacity for agriculture. With their sharply increasing incomes from oil exports, their demand for meat and for U.S. animal and feed products is sharply expanding.

Still, obstacles exist to U.S. sales in many of these markets. The European Community has its Common Agricultural Policy, which subjects grain imports to levies and duties, as a means of protecting the incomes of domestic producers. Japan has her memories of the U.S. 1973 soybean-export embargo, which has led her to seek out additional sources of oilseed and feed supplies, such as Brazil. India recently has benefitted from favorable monsoons and rising crop yields, which has enabled her to build up grain stocks and even export some supplies. And the Iranian Revolution has demonstrated that potential OPEC food demand can disappear for non-economic reasons.

Sporadic customers

The largest question mark surrounds what the USDA calls "sporadic markets"—the Soviet Union and the People's Republic of China. Government efforts to upgrade consumer living standards have boosted potential import demand in both countries. At the same time, erratic climatic and production conditions—and above all, the political basis of their market decisions—have destabilized trading patterns in world markets.

The Soviet Union ranks as our most erratic market. The fluctuation of Soviet purchases has caused wide price variations—indeed, has been the most destabilizing factor on the world grain market over the past decade. Thus, considerable volatility is now likely, considering the massive size of the trade that had originally been projected for the current (1979-80) crop year. The U.S.S.R. had been expected to import more than 32 million tons of grain, with the U.S. supplying over two-thirds of that amount. This would have represented about one-fifth of total U.S. grain exports, with a value of about \$3 billion.

The U.S.S.R.'s grain-import requirements reflect the failure of Soviet agriculture to provide enough feed grains to expand its livestock base at needed levels. Also, the livestock sector has failed to improve its feed-conversion performance over time, and this has made additional livestock production costlier than planned. Now, since it cannot count on the U.S. supplying more than one-tenth of its total grain supplies, as originally planned, the Soviet Union will be forced to liquidate substantial animal inventories and severely curtail its livestock-production goals. Even in the best of circumstances, recovery would be slow, considering that the U.S.S.R. took three years to rebuild its hog inventories following the drought-caused crop failure of 1975. With the severe cutback in U.S. supplies, this year, the Soviets will be hampered even more in meeting their objective of higher meat production. But Soviet shortages will be matched by U.S. surpluses, thereby emphasizing the problems of the U.S. as the residual supplier in world markets.

William Burke

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT (Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding	Change from	Change from year ago @	
	1/9/80	1/2/80	Dollar	Percent
Loans (gross, adjusted) and investments*	137,236	- 597	+ 16,348	+ 13.50
Loans (gross, adjusted) — total#	114,563	- 535	+ 15,709	+ 15.90
Commercial and industrial	32,990	- 339	+ 4,359	+ 15.20
Real estate	43,629	+ 113	+ 8,545	+ 24.40
Loans to individuals	24,611	+ 5	+ 4,568	+ 22.80
Securities loans	1,474	- 75	- 220	- 13.00
U.S. Treasury securities*	7,135	- 54	- 528	- 6.90
Other securities*	15,538	- 8	+ 1,223	+ 8.50
Demand deposits — total#	46,841	-3,533	+ 4,061	+ 9.50
Demand deposits — adjusted	34,105	-1,549	+ 2,394	+ 7.50
Savings deposits — total	28,797	- 42	- 1,491	- 4.90
Time deposits — total#	59,098	+ 757	+ 7,912	+ 15.50
Individuals, part. & corp.	50,276	+ 659	+ 8,644	+ 20.80
(Large negotiable CD's)	21,923	+ 255	+ 1,991	+ 10.00
Weekly Averages of Daily Figures	Week ended 1/9/80	Week ended 1/2/80	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (-)	60	- 12	-	43
Borrowings	28	177		25
Net free reserves (+)/Net borrowed(-)	32	- 189	-	68
Federal Funds — Seven Large Banks				
Net interbank transactions	+1,795	+ 619		+1,180
[Purchases (+)/Sales (-)]				
Net, U.S. Securities dealer transactions	72	-1,201		+ 729
[Loans (+)/Borrowings (-)]				

* Excludes trading account securities.

Includes items not shown separately.

@ Historical data are not strictly comparable due to changes in the reporting panel; however, adjustments have been applied to 1978 data to remove as much as possible the effects of the changes in coverage. In addition, for some items, historical data are not available due to definitional changes.

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